



ICFD 2022
CORK 3-5 MAY 2022



Virtual International Conference on Food Digestion
6th and 7th May, 2021
#VICFD2021



Dear Colleagues & Friends,

On behalf of the organising and scientific committees, I am delighted to invite you to join us at the **Virtual International Conference on Food Digestion (#VICFD2021)** on 6-7th May 2021.

Due to the worldwide SARS-CoV-2 crisis, the International Conference on Food Digestion was postponed to 2022 (<https://www.icfd2022.com/>). We hope to see you in Cork next year.

In the interim, our **Virtual International Conference on Food Digestion (#VICFD2021)** gives researchers, especially PhD students, an opportunity to present their results on an international stage.

It is organised as part of the INFOGEST research network (www.cost-infogest.eu), the objective of which is to “improve the health properties of food by sharing our knowledge on the digestive process”. INFOGEST is an open global network of more than 400 research scientists (academic and food companies) from over 40 countries.

This book of abstracts details the exciting schedule that awaits us. The conference runs over 2 days and is divided into 7 sessions with 28 oral presentations (O1-28) covering themes broadly corresponding the 6 INFOGEST working groups.

Session 1: Food Digestion and Digestion Models

Session 2: Food interaction and meal digestion

Session 3: Digestive Lipases and Lipid Digestion Absorption models

Session 4: A live session from Australia and New Zealand (all topics)

Session 5: Absorption models

Session 6: Digestive Amylases and Starch Digestion

Session 7: In silico Food Digestion Models & Gut Microbiome

In addition we have a poster session where researchers will present their work as 24 flash presentations of 3 mins in duration (F1-F25).

Looking forward to a stimulating and lively conference



Linda Giblin and André Brodkorb, TEAGASC

Poster F25

Allergome of oral-gastric *in vitro* digest of roasted hazelnut shows stronger IgE binding compared to the raw counterpart

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Background: *In vitro* pepsin digestion is important factor when assessing protein food allergenicity. Roasted hazelnut is more common in human nutrition than a raw hazelnut; however, all studies were focused on Cor a 9 allergen obtained from a raw hazelnut. There are only two studies employing *in vitro* INFOGEST digestion harmonized protocol on hazelnut with its full matrix. The aim of this study was to assess immunoreactivity of raw and roasted hazelnut gastric digests and to compare secondary/tertiary structure of Cor a 9 allergen purified from these two sources.

Methods: Digestion resistant protein fragments were analysed by 1D/2D electrophoresis. Following digestion, IgE binding from patients' pooled sera and by specific antibodies, were assessed in ELISA and immunoblot. CD spectroscopy was applied for Cor a 9 structural analyses.

Results: Cor a 11 and acidic forms of Cor a 9 were more prone to pepsin proteolysis, yet their large fragments survived partially. Cor a 8 was protected by lipids, retaining capability to bind its specific antibody. Roasting did not significantly affect secondary structure of the most abundant hazelnut allergen, Cor a 9.

Conclusion: Roasting of hazelnut seems to boost IgE binding derived from pooled sera of hazelnut allergic patients with oral-gastric allergen digests.